📧 Email Support Automation with n8n

Project Documentation

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1. Introduction

Responding to customer queries quickly is critical for maintaining trust and satisfaction. Manual email support often leads to delays and inconsistency.

This project shows how to **automate customer support email replies** using:

- **n8n** (workflow automation)

- **Gmail** (email trigger & sender)

- **Google Sheets** (FAQ knowledge base)

- **Google Gemini AI** (intelligent responses)

The workflow listens for new emails, checks past responses stored in Google Sheets, and replies automatically with the right answer. If no match is found, the AI replies with a fallback message.

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2. Objectives

- ⚡ **Reduce response time** for customer queries.

- 🤖 **Automate repetitive answers** using past Q&A.

- ✅ **Improve consistency** of support replies.

- 📈 **Scale support** without hiring more staff.

- 🔗 **Integrate easily** with tools teams already use (Gmail + Sheets).

3. Workflow Architecture

High-level flow:

```
Gmail Trigger → Limit → Edit Fields → Wait → AI Agent
                                        ↘ Sheets Lookup
                                        ↘ Gemini AI Model
                                        ↘ Simple Memory
                                        ↘ Send Gmail Response
```
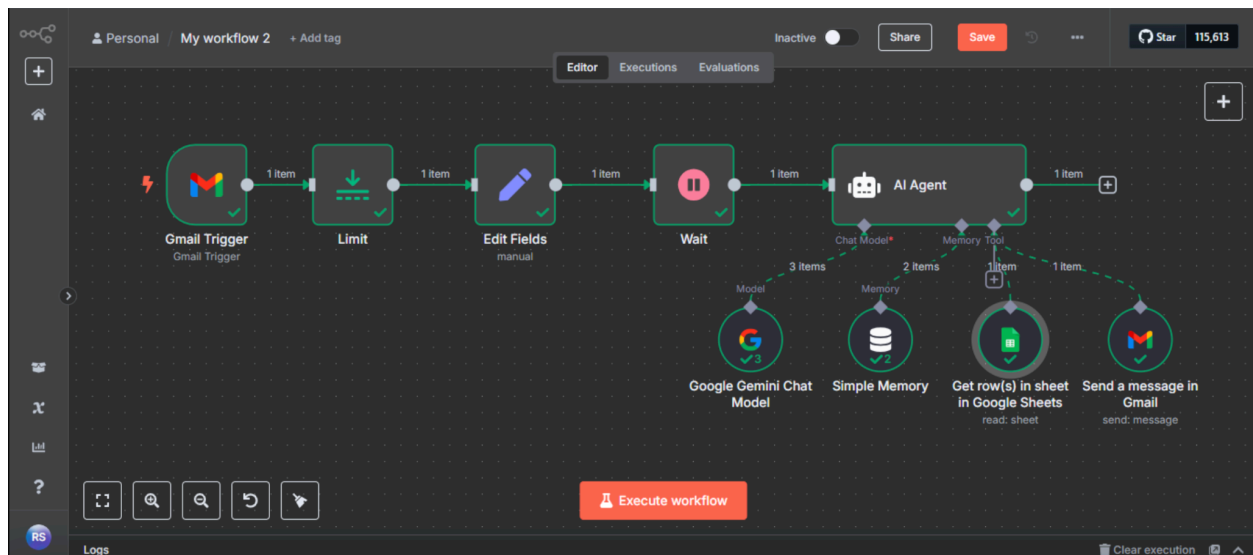

Node details:

1. **Gmail Trigger** → captures new incoming emails.

2. **Limit** → avoids processing too many emails at once.

3. **Edit Fields (Set Node)** → extracts `From`, `Subject`, `threadId`, and body snippet.

4. **Wait** → optional delay (2 seconds in this project).

5. **AI Agent** → coordinates:

   ○ **Google Gemini Chat Model** → generates response.

   ○ **Google Sheets (Get Rows)** → fetches FAQ entries.

- ○ **Simple Memory** → keeps conversation context.

- ○ **Send Gmail** → replies with generated text.

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4. Google Sheets Schema

The sheet acts as a **knowledge base** for Q&A.

Columns:

- `id` → Unique row ID

- `question` → Canonical customer question

- `answer` → Pre-written official response

- `tags` → Keywords for searching

- `last_updated` → Date for maintenance

Example row:

id	question	answer	tags	last_updated
1	How to reset my password?	Follow these steps: …	password,auth	2025-07-01

5. Matching Logic

1. Extract the **email body + subject**.

2. Query the **Google Sheets database** for relevant matches.

3. Provide top matches as **context to the AI agent**.

4. AI decides:

- ○ ✅ If match → return official FAQ answer.

- ○ ❌ If no match → reply: *"Our team will get back to you."*

5. Send reply using **Send Gmail node**.

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6. Deployment

Used in this project:

- **Local n8n Desktop** (best for testing/development).

Other options:

- **Docker Compose** (self-hosted, persistent).

- **n8n Cloud** (managed, production-ready).

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7. Security Considerations

- 🚫 Never commit credentials (Gmail, Sheets, Gemini) to GitHub.

- ✅ Use n8n credential manager or environment variables.

- 🔒 Add Basic Auth to n8n if running on a server.

- ⚖️ Rate-limit replies to avoid spamming.

- ✂️ Redact sensitive data in logs/screenshots before sharing.

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8. Future Enhancements

- Use **embeddings + vector DB** for better matching.

- Add **confidence scoring + human review** for low-confidence answers.

- Integrate with **ticketing systems** (Zendesk, Freshdesk, etc.).

- Add **analytics dashboards** for monitoring performance.

- Support **multi-language replies**.

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9. Conclusion

This project demonstrates how to combine **workflow automation (n8n)**, **AI (Google Gemini)**, and **knowledge bases (Google Sheets)** to automate email support.

It reduces manual work, improves customer response times, and sets the stage for scalable, AI-driven customer support systems.

Environment used: n8n Desktop (local).